

**CLAIMS**

1       1. A method for processing a multidimensional array object  
2       comprising array objects, said method comprising the steps of:

3               managing flags for said multidimensional array object,  
4       said flags representing whether it is possible to optimize a  
5       process for elements of said multidimensional array object;  
6       and

7               executing a machine code corresponding to a state of said  
8       flags.

2. The method of claim 1, further comprising:

      inverting said flags when a predetermined condition is no  
longer met.

3. The method of claim 2, wherein said predetermined  
condition is whether a base array of a multidimensional array  
object is allocated to consecutive memory areas.

4. The method of claim 2, wherein said machine code is either  
a machine code optimized or a machine code not optimized  
according to said predetermined condition.

5. The method of claim 2, further comprising:

      determining whether said predetermined condition is met  
when writing to said multidimensional array object.

6. The method of claim 2 wherein, further comprising:

      if said predetermined condition is met when generating  
said multidimensional array object, setting said flags to a  
generated multidimensional array object.

1       7. The method of claim 1 wherein, further comprising:  
2               if there is possibility of multi-thread processing of  
3        said multidimensional array object, generating a machine code  
4        for storing on a stack a dummy reference to said  
5        multidimensional array during execution of an optimization  
6        code.

1       8. A storage medium storing a program for a multidimensional  
2        array object comprising array objects, wherein said program,  
3        when read and executed by a computer, comprises steps of:  
4               managing flags for said multidimensional array object,  
5        said flags representing that it is possible to optimize a  
6        process for elements of said multidimensional array object;  
and  
executing a machine code corresponding to a state of said  
flags.

9. The storage medium of claim 8, further comprising:

inverting said flags when a predetermined condition is no  
longer met.

1       10. The storage medium of claim 9, wherein said predetermined  
2        condition is whether a base array of a multidimensional array  
3        object is allocated to consecutive memory areas.

1       11. The storage medium of claim 9, wherein said machine code  
2        is either a machine code optimized or a machine code not  
3        optimized according to said predetermined condition.

1       12. The storage medium of claim 9, further comprising:  
2               determining whether said predetermined condition is met  
3        when writing to said multidimensional array object.

1 13. The storage medium of claim 9, further comprising:  
2 if said predetermined condition is met when generating  
3 said multidimensional array object, setting said flags to a  
4 generated multidimensional array object.

1 14. The storage medium of claim 8 wherein, further  
2 comprising:  
3 if there is possibility of multi-thread processing of  
4 said multidimensional array object, generating a machine code  
5 for storing on a stack a dummy reference to said  
6 multidimensional array during execution of an optimization  
7 code.

15. A computer for processing a multidimensional array object  
comprising array objects, said computer comprising:

1 a central processing unit; and  
2 a program, when read and executed by said central  
3 processing unit, comprises steps of:  
4 managing flags for said multidimensional array object,  
5 said flags representing that it is possible to optimize a  
6 process for elements of said multidimensional array object,  
7 and  
8

9 executing a machine code corresponding to a state of said  
10 flags.

1 16. The computer of claim 15, wherein said program further  
2 comprises:

3 inverting said flags when a predetermined condition is no  
4 longer met.

1       17. The computer of claim 16, wherein said predetermined  
2       condition is whether a base array of a multidimensional array  
3       object is allocated to consecutive memory areas.

1       18. The computer of claim 16, wherein said machine code is  
2       either a machine code optimized or a machine code not  
3       optimized according to said predetermined condition.

1       19. The computer of claim 16, wherein said program further  
2       comprises:

3       - - - determining whether said predetermined condition is met  
4       when writing to said multidimensional array object.

1       20. The computer of claim 16, wherein said program further  
2       comprises:

3       if said predetermined condition is met when generating  
4       said multidimensional array object, setting said flags to a  
5       generated multidimensional array object.

1       21. The computer of claim 15 wherein, said program further  
2       comprises:

3       if there is possibility of multi-thread processing of  
4       said multidimensional array object, generating a machine code  
5       for storing on a stack a dummy reference to said  
6       multidimensional array during execution of an optimization  
7       code.